

1. A speech query recognition system comprising:
  - a speech recognition engine for generating recognized words taken from an articulated speech utterance; and
  - a natural language engine configured for linguistically processing said recognized words to generate search predicates for said articulated speech utterance;
  - a query formulation engine adapted to convert said recognized words and said search predicates into a structured query suitable for locating a set of one or more corresponding recognized matches for said articulated speech utterance; and
  - said natural language engine further being configured for linguistically processing said set of one or more corresponding recognized matches to determine a final match for said articulated speech utterance using both semantic decoding and statistical based processing performed on said recognized words.
2. The system of claim 1, wherein said query formulation engine generates a first level query using said recognized words alone, and further customizes said first level query using said search predicates to generate a second level query.
3. The system of claim 2, wherein said natural language operates to generate said search predicates during a time when said query formulation engine generates said first level query.
4. The system of claim 1, wherein said semantic decoding is based on a term frequency calculation, which term frequency calculation is based on calculating a lexical distance between each word in said recognized words with each word of one or more topic query entries.
5. The system of claim 1, wherein said natural language engines uses a set of context parameters for generating said search predicates.
6. The system of claim 1, wherein said speech recognition engine, said natural language engine, and said query formulation engine are implemented as routines executing on a server computing system.
7. The system of claim 1, wherein said statistical based processing includes an operation for determining noun-phrases in said speech utterance.

8. The system of claim 1, wherein said natural language engine compares noun-phrases of said set of potential matches with noun-phrases of said speech utterance to determine said final match.

5 9. The system of claim 1, wherein said final match is determined in real-time.

10. The system of claim 9, wherein said speech utterance can correspond to one of more than 100 potential corresponding potential matches, and said final match is used for determining an articulated answer to said speech utterance in less than 10 seconds.

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11. The system of claim 1, wherein said speech recognition is distributed across a client-server architecture.

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12. The system of claim 11, wherein said client generates an amount of speech data that is optimized to reduce recognition latencies.

13. The system of claim 1, wherein said recognized speech utterance is used for controlling a web page.

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14. The system of claim 1, wherein said structured query is a full text query containing SQL search predicates.

15. The system of claim 1, wherein said corresponding potential matches are retrieved from a relational database that is updated asynchronously to reduce retrieval latency.

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16. A natural language processing system adapted for assisting recognition of a speech utterance, the system comprising:

a text parsing routine for receiving text recognized by a speech recognition routine contained in the speech utterance, and for generating a first linguistic analysis of said text;

wherein said linguistic analysis is used to identify a candidate set of potential matches for said speech utterance, and

said text parsing routine being further configured for:

- (i) generating one or more second linguistic analyses of text contained in said candidate set of potential matches using both semantic decoding and statistical based processing operations;
- (ii) comparing said first linguistic analysis with each of said one or more second linguistic analyses to identify a best match for said speech utterance.

17. The system of claim 16, wherein said text parsing routine is implemented by a software routine executing on a computing system.

18. The system of claim 16, wherein said text parsing routine is implemented by a DSP and associated executable code.

19. The system of claim 16, wherein said linguistic processing includes an operation to determine noun-phrases.

20. The system of claim 19, wherein said best match corresponds to one of said candidate set of potential matches having the greatest number of noun-phrases in common with said speech utterance.

21. The system of claim 18, wherein said noun-phrases are determined and generated by breaking said text into tokens that are tagged and grouped according to their respective parts of speech.

22. A method of recognizing a speech query comprising the steps of:

- (a) recognizing text in an articulated speech utterance; and
- (b) linguistically processing said recognized text to generate search predicates for said articulate speech utterance;
- 5 (c) generating a query to identify a potential match for said speech utterance, said query being based on said recognized text and said search predicates;
- (d) determining a final match for said speech utterance by linguistically comparing any potential matches identified by said query with said articulated speech utterance;
- 10 wherein both semantic decoding and statistical based processing operations are used to determine said final match.

23. The method of claim 22, further including a step: (e) retrieving a matching response for said final match, which matching response is provided in audible form.

15 24. The method of claim 22, wherein steps (b) and (c) overlap in time.

25. The method of claim 24, wherein step (c) includes two sub-steps, including a step (c)' wherein a preliminary query is generated based on said recognized text, and a step (c)'' wherein a final query is generated based on said preliminary query and said search predicates.

20 26. The method of claim 22, wherein said final match is determined by comparing noun-phrases of said speech utterance and said potential matches.

25 27. The method of claim 22, wherein step (a) occurs across a distributed computing platform, including a client device and a server device.

28. The method of claim 22, wherein steps (a) to (d) occur simultaneously across multiple servers in response to a speech utterance from a single client device.